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ABSTRACT

Intended to provide background information and preliminary options for the California Community Colleges' Commission on Innovation, this document describes the principles of Continuous Quality Improvement (CQI) and describes policy options for implementation in the state's community colleges. Following introductory materials, the paper recommends that the Commission explore the adoption of CQI philosophies to address the challenges facing the colleges. Next, the history of the quality movement is briefly described, highlighting benefits of CQI in the business sector and examples in postsecondary educational institutions. The following principles at the core of CQI are the reviewed: (1) a commitment to continuous organizational improvement; (2) reliance on information to provide evidence for cost-benefit trade off decisions; (3) an emphasis on meeting or exceeding client needs; (4) trusting and empowering people to assume authority and act responsibly; (5) investing in on-going training and education for all staff; and (6) relying on teamwork to solve problems and implement solutions. Three models for implementing CQI in educational institutions are also described as top-down, bottom-up, and loose-tight, or involving all staff at one or two units in fundamental organizational change. Finally, specific policy options for implementing CQI are presented, including incentive grants, education and training grants, business and industry partnerships, personnel guidelines, recognition awards programs, and the addition of CQI principles to the community college accountability system and accreditation standards. (Includes 42 references.) (KP)

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ED 372 807

CHALLENGE XXI

California Community Colleges

Discussion of Policies for Achieving Continuous Improvement in Community Colleges

Policy Discussion Paper #1

U.S. DEPARTMENT OF EDUCATION
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COMMISSION ON INNOVATION

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DISCUSSION OF POLICIES FOR ACHIEVING CONTINUOUS IMPROVEMENT IN COMMUNITY COLLEGES

Commission on Innovation

Policy Discussion Paper #1

June 1992

Note: This paper was prepared by the staff of the Commission on Innovation to stimulate discussion. For comments, contact Daniel Weiler, BW Associates, 815 Allston Way, Berkeley, CA, (510) 843-8574, fax (510) 843-2436.

ABSTRACT

In the face of limited financial resources, rapid technological change, and the regular emergence of new fields of knowledge, California's community colleges are being called on to provide world-class education and training for increasing numbers of diverse students, insure access for all students, and increase the retention, completion, and transfer rates of ethnic minority and low-income students. The Board of Governors has recognized that a "business as usual" reaction to these challenges will not work; all colleges must now begin to shift to an active concern with the tradeoffs between productivity, effectiveness, and efficiency, and begin to implement practices that will enable them to analyze these issues and make the right choices. This change in perspective will require a profound change in the organizational culture of community colleges.

American business has had to undergo a similar shift in thinking in order to remain competitive in today's global economy. To meet this challenge, American business is implementing a management revolution that emphasizes the need for continuous improvement in the quality of goods and services, recognizes the knowledge and creativity of employees and empowers them to act, and supports decisions with hard information on cost-benefit tradeoffs. This revolution in business management is knows as Continuous Quality Improvement (CQI); its principles are also beginning to be employed by a number of higher education institutions.

This paper suggests that the Commission on Innovation explore recommending to the Board of Governors that all community colleges take necessary steps to adopt and implement the CQI philosophy. CQI principles include a commitment to continuous organizational improvement; reliance on information to provide evidence for cost-benefit tradeoff decisions; an emphasis on meeting or exceeding client needs; trusting and empowering people to assume authority and act responsibly; investing in on-going training and education for all staff; and relying on teamwork to solve problems and implement solutions.

The paper identifies a number of preliminary policy options that are consistent with this suggestion. Options include incentive grants to colleges to encourage adoption of CQI; education and training grants to help colleges train staff in CQI principles; development of partnerships with business and industry for teaching and learning CQI; creation of personnel guidelines to help colleges recruit, train, evaluate and reward personnel based on CQI principles; a CQI recognition awards program for colleges based on a national model administered by the Commerce Department; and the addition of CQI principles to the community college accountability system and to regional accreditation standards.

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PREFACE

California's community colleges are facing a period of unprecedented growth in the number and diversity of students who will seek an education before the turn of the century. More students, especially from minority and poor backgrounds, will want to enter community colleges as their best—and often only—gateway to the higher levels of education necessary for success in an increasingly competitive world. Yet the dual pressures of growth and limited budgets could reduce access precisely for those students for whom community colleges have traditionally been the principal avenue for equal educational opportunity.

Despite these pressures, the California Community Colleges are committed to insuring access for all students, and, in particular, to increasing the retention, completion, and transfer rates of ethnic minority and low-income students. To do so, the colleges realize they must introduce far-reaching changes in instructional programs, management strategies, relations with other sectors of society, and the use of facilities and resources.

The Commission on Innovation was formed by the California Community College Board of Governors in November, 1991 to address these concerns. With the colleges facing continuing budget pressures combined with unprecedented growth in student numbers and diversity, the Board realized that "business as usual" would no longer be possible, and asked the Commission to identify innovative ways in which the community colleges could respond to these challenges. The Commission was asked to write a report that proposes policies which build on the colleges' proven record of excellence in order to achieve higher quality, more cost-effective instruction and management for an era of growth and diversity marked by limited budgets.

As an aid to the Commission in its deliberations, the Chancellor has asked the Commission staff to prepare a series of Policy Discussion Papers that provide back-

ground information and *preliminary* policy options for Commission consideration. These staff papers are intended specifically to stimulate discussion from which the Commission can give direction to the staff to further the research and policy analysis process. All the papers will be widely circulated in order to facilitate discussion among community college professionals and feedback from the field. The papers, which will be based on reviews of relevant literature and discussions with community college professionals and national experts, will address nine crucial areas the Chancellor has asked the Commission and the three **Challenge XXI** Task Forces on Management, Instruction, and Facilities to consider:

1. How could facilities be more efficiently used and planned in order to accommodate growth and save money?

2. How could the colleges use technology in order to enhance learning, improve management, and increase cost-effectiveness?

3. How could partnerships between the community colleges and business be better utilized and further developed to help enhance community college growth and diversity, deal with college resource limitations, and address issues of economic development?

4. How could the community colleges work cooperatively with other education segments in order to accommodate growth and increase cost-effectiveness?

5. How could the colleges achieve continuous improvement in the quality and efficiency of their management and their services to a diverse clientele?

6. How could the community colleges become more effective learning environments for an increasingly diverse population, and in particular assure that underserved students receive the academic preparation required to prepare them for transfer?

7. What changes in system-wide and local college governance could enhance the colleges' efficiency and effectiveness?

8. How could additional revenue (from existing and/or new sources) be raised in order to help accommodate future growth?

9. **What additional steps should the system take to ensure accountability for efficiency and effectiveness?**

The Chancellor has made it clear that the answers to these questions must all address a common underlying theme: how the California Community Colleges can ensure access for all students, and increase the retention, completion, and transfer rates of ethnic minority and low-income students.

This Policy Discussion Paper addresses the question of how the community colleges can achieve continuous improvement in the face of budget limitations. The policy options discussed in the paper are relevant to all the questions listed above, and are particularly concerned with the issue raised by Questions 5 and 9.

A. OVERVIEW

California's community colleges face a severe challenge. With California's economy struggling to match and exceed the productivity growth of European and Asian competitors, the community colleges are being called on to provide world-class education and training that will equip California workers and businesses for the next century. The colleges must provide this high quality of service for increasing numbers of diverse students, insuring access for all students while increasing the retention, completion, and transfer rates of ethnic minority and low-income students. And they must meet these objectives despite growing operating expenses and limitations on financial resources, rapid technological change, and the regular emergence of new fields of knowledge.

Until now, the community colleges have been largely able to respond to these challenges by building more facilities and hiring additional staff. California's prosperity has for the most part been able to finance a continuous expansion of community college services patterned on long-established procedures for delivering instruction and managing college business affairs. However, the Board of Governors has recognized that this "business as usual" reaction to the challenges of growth and diversity will not work well in an era of budget limitations coupled with demands for higher levels of educational quality and equity. The colleges must re-consider the assumption that access can be maintained and quality improved through increased funding, with little change in the ways in which the colleges are managed and educational services provided. Enrollment growth will be too great, demands for higher quality will be too heavy, and state funding will fall too far short to permit such a "business as usual" response. Rather, all colleges must now begin to shift to an active concern with the tradeoffs between productivity, effectiveness, and efficiency, and begin to implement practices that will enable them to analyze these issues and make the right choices. This change in perspective will require the equivalent of a revolution in thinking for administrators, faculty, trustees, and students about their current practices and relationships: creative re-invention of management; inventive ideas

about how instruction and services are delivered for the extraordinary diversity of students; fresh ways to be responsive to clients (students, communities and employees) and to form mutually beneficial relationships with four-year institutions and with the K-12 system; and a new commitment by all to rely on measurements of quality, efficiency, effectiveness, and equity. In short, a profound change in the organizational culture of community colleges will be necessary.

American business has had to undergo a similar shift in thinking in order to remain competitive in today's global economy. Faced with competition from countries where wages are but a fraction of those paid to American workers, many businesses have had to greatly increase the productivity of their work force—or move their business out of the country in order to survive. To meet this challenge, American business is implementing a management revolution that emphasizes the need for continuous improvement in the quality of goods and services, recognizes the knowledge and creativity of employees and empowers them to act, and supports decisions with hard information on cost-benefit tradeoffs. This revolution in business management is knows as Continuous Quality Improvement (CQI),[1] and the highest performing American business organizations are committed to the principles of this management philosophy in every aspect of their activities and structures. Firms as diverse as Motorola, Ford, Xerox, IBM, Hewlett-Packard, American Express and Hospital Corporation of America have adopted CQI principles in order to cut costs, improve the quality of goods and services, and increase productivity—in short, to survive and thrive in an increasingly competitive world. These principles are also beginning to be employed by a number of higher education institutions, with equally encouraging results.[2]

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[1]The "quality" movement takes many names, and in higher education is often referred to as Total Quality Management (TQM). A national network of community colleges that are implementing these quality principles calls itself the Continuous Quality Improvement Network for Community and Technical Colleges.

[2]Discussed below in more detail.

In light of the challenges facing the community colleges and the benefits that American business and higher education institutions have realized from CQI principles and methods, this paper proposes that the Commission on Innovation explore recommending to the Board of Governors that all community colleges take necessary steps to adopt and implement this philosophy.

The introduction of CQI practices can lead to college acceptance and integration of approaches that depart from "business as usual," including the pervasive use of technology, new instructional strategies, and new relationships with other education segments, business, and communities. Thus, in addition to its promise for more efficient management, the community colleges' adoption of CQI could pave the way for the revolution in thinking that the Commission believes is necessary. This Policy Discussion Paper provides information on the background and principles of CQI and presents a number of preliminary policy options in this area for Commission consideration.

B. BACKGROUND

History of the Quality Movement

There have been four major periods in the evolution of quality approaches to management: *inspection* (pre-1930s), *statistical quality control* (1930s-1950s), *quality assurance* (1950s-1980s), and *strategic quality management* (1980s-1990s).[3]

Inspection accompanied the introduction of mass production in the industrial revolution, and was primarily concerned with detecting defects through simple activities such as counting, grading, and repairing.

Statistical quality control was born in the 1930s at Bell Laboratories, where a statistician recognized that variability in industry could be accounted for by using probability and statistics. By understanding whether product variation was inherent in the production process or was the result of something more specific, quality could be "controlled in" with sampling and statistical techniques.

Quality assurance principles were embraced by American industry after World War II, with the understanding that the prevention of problems was a management function in which the entire production chain, from product design to marketing, affected quality. The idea of "zero defects" became popular—with the goal of promoting a constant, conscious desire to do the job right the first time. In 1950, W. Edwards Deming took to Japan his message that "building in" quality required a systematic approach to problem-solving, consumer research, goal-setting, and an organizational culture that focused on continuous improvement. The Japanese not only listened and learned, they advanced the

[3]This discussion draws on Garvin, 1988 and Seymour, 1992.

quality movement substantially and transformed the reputation and competitiveness of Japanese products.

Continuous quality improvement (also called *strategic quality management* or *total quality management*) is the successor to the quality assurance era, and has been a growing movement in American business and industry for at least a decade. This approach views quality as a leadership function that can be "managed in" to an organization's daily work—and also sees quality as the responsibility of everyone in the organization. Quality is a component of strategic and financial planning that is linked directly to profitability and is viewed as a competitive weapon, not just a problem to be solved. These concepts have enabled a wide variety of service, non-profit, governmental, and educational organizations to join the manufacturing sector in using the management philosophy and techniques of the quality movement.

Benefits of CQI

For some companies, an emphasis on continuous quality improvement has meant the difference between business failure and profitability in an increasingly competitive world. Companies that have succeeded in changing their corporate cultures to embrace the spirit and techniques of CQI have increased their productivity, reduced costs, improved employee morale, and increased profits. In a letter to the *Harvard Business Review*, the CEOs of American Express, IBM, Procter and Gamble, Ford, Motorola, and Xerox wrote, "Results (of using CQI approaches) from our companies range from halving product-development cycle time to a 75% improvement in [problems with] shipped products to a $1.5 billion savings in scrap and rework over a five-year period."[4] A well-known Northern California example of the successful application of CQI methods is the NUMMI automotive plant (a GM-Toyota partnership) in Fremont. NUMMI went from an inefficient level of production and an inadequate level of quality, which required it to be closed in 1984, to a plant that is fully competitive with Japanese plants in terms of

[4]Robinson, 1991.

production and quality. Workers play an integral role in maintaining product quality, and are in turn rewarded through incentive pay for the extra training and skills they need to perform a variety of roles.

Continuous Quality Improvement in Higher Education

A pioneering group of colleges and universities are leading the way toward quality methods in higher education. Harvard, Penn, Chicago, Carnegie Mellon, Minnesota, Maryland, Georgia Tech, Miami, Oregon State, Colorado State—all have taken steps to adopt quality principles, usually known in higher education as Total Quality Management (TQM). A recent partial compilation listed 78 four-year institutions and 14 community colleges involved in quality programs in October, 1991.[5] Many are following in the footsteps of prominent business alumni; others gained their initial training from major firms or have joined forces with local businesses to work on implementing quality principles at both institutions.

Community colleges are among the frontier participants in the higher education quality movement. Fox Valley Technical College (WI) has now had more than six years of experience with TQM, and has become a national model among community colleges. Delaware County (PA), Houston (TX), Jackson (MI), and Lamar (CO) and at least a dozen other community colleges have to adopted these principles more recently.[6] In California, El Camino College began to implement TQM several years ago, and leads the system in TQM experience. MiraCosta college has also recently begun to adopt these ideas, and at least nine other California colleges are planning or starting projects designed to use continuous quality improvement methods. A recent TQM workshop conducted by El Camino was attended by community college administrators and faculty from all over the state who are seeking ways to increase the efficiency and effectiveness

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[5]"Looking for a Quality Education?" *Quality Progress*, October 1991, pp. 61-72.

[6]Marchese, 1991. The Continuous Quality Improvement Network for Community and Technical Colleges has 16 members.

of their institutions. A number of California community colleges also offer courses for their own students or training for business and industry in quality principles and methods.

Colleges that have achieved broad implementation of CQI practices report encouraging results:

- Fox Valley has reported "high, measurable returns in morale, cost reduction, student attainment, and community approbation,"[7] and has created an influential Quality Institute to share its experience.
- El Camino has also reported significant cost savings and other efficiencies (including a significant reduction in turnaround time in the procurement of equipment and materials and a saving of over $450,000 in district expenses). The district has created its own Quality Institute to help advance the quality cause in California.
- At Delaware County Community College, analyses conducted as a result of CQI procedures made it unnecessary to build an additional parking lot —saving $150,000—and enabled staff to reduce unanswered Admissions Office calls from 16 percent to zero and maintain this record for three years with no increase in personnel, despite a 20 percent increase in calls.

As the examples above suggest, CQI efforts often begin in college business and support areas, in part because the models for CQI are usually business organizations. However, the growing literature on quality programs in higher education suggests that these principles are also beginning to have a positive impact on the teaching and learning process. One college reported an almost 80 percent four-year matriculation rate after less than three years' experience with quality principles in academic areas and student affairs.[8] Other colleges are using surveys, student and business focus groups, expert consultation, and faculty follow-up visits to companies (all components of CQI practices) in order to obtain data that will help them understand how to upgrade their curricula and improve their student services.

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[7]Ibid.

[8]Seymour and Collett, 1991.

Most higher education CQI efforts have been modest, undertaken just in the last year or two, with little impact so far on institutional cultures. Institutions that have worked on the philosophy and practices the longest, however, appear to have changed significantly. Staff members describe changed mindsets and improved morale, reduced cynicism, and such specifics as an absence of formal grievances and less use of sick leave.[9]

Operating Principles of Continuous Quality Improvement

Institutions and organizations committed to CQI become *learning organizations*, using modern analysis techniques to understand the ever-changing world in which they function. Traditional organizations tend to make incremental, short-term responses to complex, long-term challenges, e.g., a management reorganization that only changes things on paper, a modest improvement in a product that is losing sales, or token efforts to respond to customer complaints about delayed deliveries. Such behavior insulates organizations from the learning required for successful interactions with a complex world. High performing organizations, in contrast, express their deep dedication to the philosophy and implementation of continuous quality improvement in everything they do. They are constantly changing, constantly learning, constantly doing things better.

The following principles lie at the core of CQI approaches:[10]

1. *Continuous organizational improvement.* Quality is a journey, not a destination; organizations that are not constantly adapting and improving are losing ground. With increasing numbers of diverse students, limitations on financial resources, rapid technological change, and the regular emergence of new fields of knowledge, community colleges will have to absorb this philosophy and maintain a determination to continuously improve the efficiency and effectiveness of their services and operations. This will require new ways to think about decision-making in the colleges.

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[9]Ibid.

[10]Based on Marchese, 1991, and Seymour, 1992.

2. *Reliance on information.* High performing organizations are driven by information, not speculation, assumptions, or "the way things are done around here." Information enables constant organizational monitoring, focuses attention on process and away from people, and gives workers positive, continuous evidence of their contributions. In the community colleges, a new reliance on information would require a substantial strengthening of internal research capabilities. Continuous measures of student outcomes and employer and community views, for example, would provide concrete evidence to college faculty and administrators of the efficacy of their programs. This information would enable college personnel to adjust their goals and make informed cost-benefit tradeoff decisions.

3. *Client-driven decisions.* In CQI organizations, quality is defined by customers and clients—internal as well as external—not by administrators or technicians. Meeting or exceeding client needs is the first priority of the organization. In community colleges, the clients are students, employers, and communities, as well as college colleagues. The colleges—more than many other institutions—have long been sensitive to the needs of these clients and would not find such an emphasis foreign to their way of thinking. But college information systems could collect better data on client needs in order to help shape college goals and programs.

4. *Empowerment of people.* High performing organizations understand that most problems are the result of flawed processes, and that people want to do the right thing. In these organizations people are given appropriate authority and trusted to act responsibly. Work processes are not evaluated by distant supervisors, they are assessed by the people who do the work. In the community colleges, faculty would have more responsibility and authority to determine how instructional services should be provided and would evaluate the quality of those services; other staff at every level—business services, student support, maintenance—would contribute to setting specific goals and be empowered to decide how those goals could be realized.

5. *On-going Training.* Empowering people means also investing heavily in human resource development to ensure that all employees share the organizational vision and have the skills they need. The community colleges would invest in education and training for staff at all levels. Time would be set aside for staff-wide discussion of college goals and CQI processes, coursework with instructors who teach CQI, and training in CQI methods with both college and business community experts.

6. *Reliance on teamwork.* In the CQI world responsibility is often shared by teams, which are not the usual committees, but self-directed work groups composed of the people who work directly with a process, coming together to

work on process improvement. The teams have their own required competencies and protocols and their collaborative work leads to team and organizational learning. Reward systems in high performing organizations also focus less on individuals and more on teams. At community colleges, for example, politically balanced committees composed of people representing "interests" might be replaced with working teams composed entirely of faculty and staff who are most directly concerned with (and know the most about) the problem at hand.

The movement toward continuous quality improvement is the latest step in the continuing elaboration of quality concepts that began with the first quality control efforts. Organizations devoted to CQI understand that people, with all their capabilities and diversity, are the central resource of any entity, and that self-aware, learning organizations will dominate the global economy of the 21st Century. As community college's adopt CQI, they will refine and develop the philosophy and principles so that they uniquely fit the context of higher education.

Implementing CQI at the Local Level

Recent research has identified three models for implementing CQI in higher education:[11]

1. *Top-down models* begin with senior administrators studying CQI principles and tools. A vision is developed for the organization, together with a long-range implementation plan. Major divisions of the organization then study CQI principles and education and training is conducted at various organizational levels until CQI practices permeate the organization. The strength of this model is that senior leadership can generate enthusiasm and commitment to change, and an orderly process of implementation can create a sense of purpose and movement. The danger is that practices that begin at the top of an organization can become standardized and inflexible, whereas a quality improvement plan needs to be constantly revised and modified. Moreover, if CQI practices appear to be "mandated" from above they can look like just another management fad and engender resistance throughout the organization.

[11]Seymour and Collett, op. cit.

2. *Bottom-up models* emphasize voluntary pilot programs whose successes are diffused throughout the organization. By emphasizing initiatives at lower levels of the organization this approach avoids the danger of people feeling that new practices are being mandated whether they like it or not. This model also avoids the risk that CQI practices will be defined rigidly, since each organizational unit is free to adapt CQI to its unique needs. The danger is that this approach may not have enough legitimacy to generate significant cross-institutional movement. Moreover, successful pilot programs in one area of an organization may generate only indifference (or hostility) among other employees who choose to believe that the pilot program has nothing to do with them.

3. *Loose-tight models* attempt to take a middle road to CQI implementation. They emphasize involvement at senior management levels, a loosely developed implementation plan, and starting with one or two organizational units willing to pursue fundamental changes in their philosophy and operations. In these units, planning and training are detailed and comprehensive, all unit employees are involved from the outset, and quality teams are established. This approach—low key at the institutional level and highly visible at the local unit level—often exhibits most of the strengths and few of the weaknesses of the first two models.

Many versions of these implementation models have been tried in higher education, and successes have been claimed for variants of all three approaches. Most institutions start small and hope to spread CQI principles throughout the institution over time. The President of Fox Valley Technical College, on the other hand, advocates a "top-down" strategy that starts with chief administrators and board members—but is careful to ensure the active involvement of faculty and other staff in every stage of planning and development.[12] Other institutions have concentrated on educating as many staff as possible, building a critical mass of support for CQI, and then beginning implementation with an array of small projects using pilot teams throughout the institution.

The best implementation strategy for an institution will depend on its particular circumstances—its mission, culture, organizational strengths and weaknesses, opportuni-

[12]Spanbauer, 1992.

ties and risks. In any setting, the shift to continuous quality improvement will require patience, adaptability, and a willingness to experiment. There is widespread agreement that two factors are always essential: leadership from people at all levels of the organization, and a strong commitment to ongoing education and training for all administrators, faculty, and staff.[13]

The shift to high performance, CQI practices will take time and dedication,[14] and cannot be expected to occur overnight. But the experience of both Japanese and American companies—and now, increasingly, American colleges—shows that when these principles do become deeply embedded throughout an organization it is possible to realize major gains in cost savings and effectiveness.

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[13]Spanbauer, for example, recommends that institutions form education and training committees to develop and help implement a formal plan of education to enhance the competence of all employees in new skills related to quality.

[14]For example, Sam Schauerman, President of El Camino College in California, estimates that it may take seven to ten years to fully implement TQM at his institution.

C. PRELIMINARY POLICY OPTIONS

This paper has suggested that the Commission may wish to recommend to the Board of Governors that all community colleges take steps to adopt and implement the philosophy and principles of continuous quality improvement. As the discussion above indicates, community college implementation of this philosophy could profoundly affect every facet of college operations and lead to significant improvements in efficiency and effectiveness. For the most part, CQI could be implemented by the community colleges without the need for new legislation or regulations, or a massive infusion of new money (though some college resources *will* have to be invested, particularly in education and training). If the Commission believes that the community colleges should adopt the CQI approach, it could consider the following policy options, which contemplate the gradual introduction of continuous quality improvement, led by flagship colleges that would pioneer the system's movement to higher efficiency, productivity, and quality.

Option 1. ***Incentive grants.*** **Create a competitive grants program as an incentive for colleges to adopt and implement the principles and practices of continuous quality improvement.**

Many colleges contemplating the introduction of CQI may support the concepts of the quality movement but hesitate to risk increasingly scarce resources on unchartered waters. A competitive grants program could provide the "risk money" these institutions need as an incentive to proceed.

The program would be administered by the Chancellor's Office and would seek proposals from colleges willing to make a long-term commitment to the implementation of CQI principles and practices. The grants would be used to defray the costs of education and training for college personnel, pay for release time for instructional staff involved in planning, and help support the development and institutionalization of measurement and information tools to support CQI deci-

sions. College proposals would be evaluated for evidence of institutional commitment to and understanding of the CQI process. Evaluations would be conducted by an independent team of CQI experts working with Chancellor's Office staff.

Grant amounts would have to be large enough to provide a reasonable incentive for colleges that would like to try CQI but feel unable to risk their own resources. Grant renewal should be guaranteed each year for five years, subject to continued availability of funds and college abilities to demonstrate steady progress toward CQI implementation.

A recent example of such a competitive grants incentive program is the community college Transfer Center Pilot Program, which awarded and annually renewed grants to 20 colleges for developing and implementing Transfer Centers on their campuses. The Pilot Program was supported for five years, after which the Chancellor's Office supported the introduction of Transfer Centers at all colleges.

Under the present governance arrangements, the funds for this program will have to be provided by special legislation.

Option 2. ***Education and training grants.*** **Create a matching fund program to assist colleges with CQI education and training for administrators, faculty, and staff.**

Colleges that are serious about implementing CQI processes will need to devote considerable effort to education and training for all college personnel. This education and training can take the form of self-study using available materials; work with outside consultants or with experts from institutes at other educational institutions; collaboration with local business firms; or, in some cases, course work with faculty at the college (or one nearby) who teach quality methods as part of the college curriculum and/or provide training to the private sector. Many

colleges decide to train one or more staff to become trainers in CQI, who then provide continuing training to college personnel and help to train personnel at other colleges.

The community colleges currently budget resources for professional development programs and set priorities that determine what areas those programs should emphasize. A fund that provided matching grants for education and training in CQI would provide an incentive for colleges to set aside a portion of their own resources for this purpose.

The Chancellor's Office would create and administer an education and training fund that provides matching grants to community colleges that set aside a portion of their own professional development resources for education and training in quality principles and processes. Priority in grant awards would go to colleges that commit enough of their own resources to achieve an institution-wide impact once matching dollars are added. Grant proposals would specify the range of professional development activities being considered, and these activities would be judged by the grant awards panel for their relevance and effectiveness in helping the college implement CQI approaches. This education and training fund would have to be authorized and funded by legislation.

Option 3. ***Partnerships with business and industry.*** **Work with business and industry to encourage college-business partnerships in teaching, learning, and adopting CQI.**

Private sector firms lead the quality movement in the United States and often have much to teach the community colleges about CQI principles and methods. Private firms have often made training for their employees available to local community staff, and community college pioneers in CQI have learned a great deal from local business partners. Expansion of these community college-business partnerships would benefit both the colleges and business: (1) More colleges

would be able to take advantage of business experience in implementing CQI practices; (2) as more community colleges learn about CQI many will create their own CQI training programs, which would be available to businesses in their areas through contract education arrangements that would in turn earn money for the colleges; (3) these training programs would also be used to help spread CQI to other community colleges.

Both Fox Valley Technical College and El Camino College are examples of the pattern described above. Both institutions learned much about CQI from local business; both now provide CQI courses for their own students and have launched quality training institutes that contract with private businesses to provide CQI training; both now offer this training through their institutes to other community colleges.

This recommendation has three components: First, the Chancellor's Office would develop a publication that describes the elements of successful community college-business partnerships for CQI, with examples from California and other states. The publication would be circulated to all California community colleges and the Board of Governors would encourage college initiatives to form partnerships with local business firms employing CQI methods.

Second, the Chancellor's Office would identify businesses in California that are following CQI principles and would play an active role in brokering partnerships between these firms and their local community colleges.

Third, the Chancellor's Office would seek financial support from business and industry to help establish community college programs for teaching CQI and providing training to the private sector.

Option 4. ***Personnel guidelines.*** **Develop personnel guidelines to assist colleges in recruiting, training, evaluating, and rewarding personnel based on quality principles.**

Over the next decade, thousands of faculty, administrators and staff will retire from the community colleges and thousands of new staff will be recruited to replace them, providing many opportunities to "raise the average" throughout the system. Colleges that have decided to shift to CQI will be particularly interested in recruiting faculty, administrators, and staff who have been trained or have experience in quality methods.

Beyond recruitment, community colleges implementing quality systems will need guidance in setting standards for training, evaluation, and merit rewards. Guidelines that focus on the meaning of quality in the attributes and behavior of college personnel would help the colleges know how to recognize these attributes when recruiting; what activities they should seek to encourage and engender through training; what to look for in personal and team evaluations; and what kinds of behavior merit unusual recognition and rewards.

Personnel quality guidelines would be drafted by a team of college professionals from the leading CQI colleges in California, in consultation with other leading community colleges across the nation. The guidelines would be circulated widely for comments, provided to all colleges in the system, and revisited and revised regularly.

Option 5. ***Awards.*** **Develop a CQI Recognition Awards Program for colleges that demonstrate significant improvements in efficiency, productivity and effectiveness through the application of quality principles and practices.**

A CQI Recognition Awards Program would serve two purposes: (1) by providing special recognition for quality processes and results, it would create an added incentive for colleges to make CQI work on their campuses and (2) it

would provide award criteria and expert feedback that colleges could use to assess their progress.

The Board of Governors would appoint a distinguished panel of quality experts drawn from higher education and business to develop criteria for and administer the Quality Recognition Awards Program. The award criteria would seek information about quality results, and would particularly focus on the implementation of continuous quality conditions and processes. Colleges applying to be considered for the quality award would receive a set of guidelines explaining the award criteria and feedback from the judging panel(s). The guidelines, which would include an explicit scoring system, could be used by any college to assess its own progress in implementing CQI practices. The awards should be given the highest possible prestige and publicity, with award winners announced yearly.

The model for this recommendation is the Baldridge National Quality Award, administered from the Commerce Department with winners often announced from the White House. Criteria for the award and detailed guidelines were developed by a group of quality experts, and many companies apply in order to use the detailed award guidelines as a self-study exercise. Last year, 200,000 copies of the guidelines were distributed.

The Rochester Institute of Technology and USA Today sponsor a similar competition, the RIT/USA Today Quality Cup for individuals and teams. Four-hundred thirty-one organizations, including government agencies, non-profit groups, and small businesses competed for the first cup, announced this spring. Winners included a steel plant, a small electrogalvanizing firm, a Navy depot operations team, Federal Express, and four non-profit hospitals.

Option 6. ***Accountability.*** **Add measures of CQI practices to the state-wide accountability system.**

AB 1725, signed into law in 1988, directed the California Community Colleges to develop a comprehensive educational and fiscal accountability system. In response to this directive, the Chancellor's Office has been leading an effort to develop a model system that will incorporate measures of college, district, and system outcomes in the areas of student access, success, and satisfaction, staff composition, and fiscal conditions. Pilot districts have developed prototype accountability reports and work is proceeding to identify common measures and methods that would become part of the state-wide accountability system.

Measures incorporated into the final version of the accountability system would alert the community colleges to the importance of the areas being measured and would constitute an incentive for colleges to review their programs and practices in those areas in order to ensure desirable outcomes.

The Chancellor's Office would incorporate into the state-wide accountability system measures of college and district progress in implementing CQI principles and practices. The measures could be based on the criteria and guidelines developed for the Quality Recognition Awards Program (see #5, above); their inclusion in the accountability system would constitute a practical expression of the system's commitment to CQI and an incentive for colleges to adopt and implement CQI principles and practices.

Option 7. ***Accreditation standards.*** **Ask the accrediting agency for California community colleges to include CQI processes as part of its accreditation standards.**

Every six years, each community college in California is visited by a team of colleagues selected by the Western Association of Schools and Colleges (WASC). The team evaluates college programs and procedures in order to decide whether

to renew the WASC approval of the college—it accreditation—as a public institution whose programs meet professional standards of quality. These site visits are preceded at every college by a period of self-study and preparation of an accreditation report to the WASC team.

The Chancellor's Office would seek to have WASC include CQI processes on the list of features its accreditation teams will review during their college site visits and to ensure that the teams include members who are conversant with the quality movement. Because the accreditation reviews are preceded by intensive self-evaluation and analysis at the college, the addition of CQI processes to the list of WASC interests would provide another opportunity for college self-analysis and reflection as part of their continuing improvement efforts.

Students of CQI warn that attempts to "inspect in" quality by setting specifications can shift responsibility away from those who work within the process to those who inspect the process. This can result in a loss of obligation and ownership that works against the goals of the quality movement. Thus, colleges should set their own quality standards, not define quality on the basis of external standards selected by an accreditation commission. This recommendation therefore does not contemplate a request to WASC to define quality *outcomes* for community colleges beyond what WASC now considers necessary for purposes of accreditation. Rather, WASC would be asked to add CQI *process* measures to its list of features of interest.

D. SUMMARY

This paper has suggested that the Commission on Innovation consider whether it should recommend to the Board of Governors that the community colleges adopt Continuous Quality Improvement principles. The paper has argued that CQI would be an innovative alternative to "business as usual" responses to enrollment growth, diversity, and the need for higher quality education, in an era of scarce resources. The paper has reasoned that the experience of American business and of leading edge higher education institutions suggests that community college adoption of CQI principles could bring significant improvement in the efficiency and effectiveness of college management and make it easier for the colleges to embrace innovations in instruction and other areas. In support of this suggestion, the paper has offered a number of policy options for Commission consideration.

The Commission must decide whether it would consider recommending to the Board of Governors that the community colleges adopt CQI, and if so, which policy options it would also like to further develop for possible recommendations to the Board.

If the Commission decides to support the thrust of this proposal, the staff will work with the Commission, the Task Forces, other community college professionals, representatives of interested organizations, and national experts to incorporate a revised version of the policy options in the draft of the Commission report to the Board of Governors.

SELECTED BIBLIOGRAPHY

ASQC/FICE, Proceeding of the May 26, 1988 Seminar Proposing a National Quality Initiative, 1988.

ASQC/FICE/COPA/NCATE, Summary Proceeding of the Second National Educational Quality Initiative (NEQI) Conference, 1989.

Berry, T. *Managing the Total Quality Transformation*. New York: McGraw-Hill, 1991.

Bober, Roger P. "Faculty Externships: Catalysts for TQM," *Leadership Abstracts*, Vol. 4, No. 14, November 1991.

Bossert, J.L. *Quality Function Deployment: A Practitioner's Approach*. Milwaukee, WI: American Society for Quality Control Press, 1991.

Chaffee, Ellen Earle. *Total Quality Management: A Guide for the North Dakota University System*. North Dakota: State Board of Higher Education, 1991.

Coate, L.E. "Implementing Total Quality Management in a University Setting," Oregon State University, July 1990.

Cornesky, R.A., and colleagues. *W. Edwards Deming: Improving Quality in Colleges and Universities*. Madison, WI: Magna Publications, 1990.

Crosby, Philip. *Quality is Free*. Mentor Books, New American Library.

Deming, W.E. *Out of the Crisis*. Cambridge: MIT Center for Advanced Engineering, 1986.

Drucker, Peter. *Managing for the Future*. 1992

Garvin, D.A. *Managing Quality: The Strategic and Competitive Edge*. New York: Free Press, 1988.

Gitlow, H.S., and Gitlow, S.J. *The Deming Guide to Quality and Competitive Position*. Englewood Cliffs, NJ: Prentice-Hall, 1987.

Gitlow, H.S., and Process Management International. *Planning for Quality, Productivity, and Competitive Position*. Homewood, Ill: Dow Jones-Irwin, 1990.

Glasser, William. *The Quality School*. New York: Harper & Row, 1990.

GOAL/QPC. *The Memory Jogger: A Pocket Guide of Tools for Continuous Improvement.* Methuen, Mass: GOAL/QPC, 1988.

Goldratt, Eliyahu M., and Cox, Jeff. *The Goal: A Process of Ongoing Improvement.* New York: North River Press, 1986.

Imai, M. *Kaizen: The Key to Japan's Competitive Success.* New York: Random House, 1986.

Ishikawa, K. *What is Total Quality Control? The Japanese Way.* Englewood Cliffs, NJ: Prentice-Hall, 1985.

Juran, J.M. *Juran on Planning for Quality.* New York: Free Press, 1988.

Juran, J.M. *Juran on Leadership for Quality: An Executive Handbook.* New York: Free Press, 1989.

"Looking for a Quality Education?" *Quality Progress*, October 1991, pp. 61-72.

Mann, Nancy R. *The Keys to Excellence: The Story of the Deming Philosophy (2nd Edition).* Los Angeles: Prestwick Books, 1987.

Marchese, Ted. "TQM Reaches the Academy," *AAHE Bulletin*, November 1991.

Miller, R. (ed.) *Applying the Deming Method to Higher Education for More Effective Human Resource Management.* Washington, D.C.: College and University Personnel Association, 1991.

Needham, Robbie L., "Total Quality Management: An Overview," *Leadership Abstracts*, League for Innovation, Vol. 4, No. 10, 1991.

Robinson, James D., "An Open Letter: TQM on the Campus," *Harvard Business Review*, Nov.-Dec., 1991.

Rocheleau, L., et al, "A Restructure Quality High School: The Continuous Improvement Process in Action," Sitka, Alaska, Mt. Edgecombe High School, 1990.

Rodriguez, Raul G., "Total Quality Commitment in Higher Education: Improving Institutional Research," Yosemite Community College District, Inquiry Newsletter, May 1991.

Schargel, Franklin P., "Promoting Quality in Education," *Vocational Education Journal*, Nov/Dec. 1991.

Scherkenbach, W. *The Deming Route to Quality and Productivity: Road Maps and Roadblocks.* Rockville, MD: Mercury Press/Fairchild Publications, 1986.

Senge, Peter. *Fifth Discipline*. New York: Doubleday, 1990.

Seymour, Daniel T. *On Q: Causing Quality in Higher Education*. New York: American Council on Education and Macmillan, 1992.

Seymour, Daniel, and Collett, Casey. *Total Quality Management in Higher Education: A Critical Assessment*. Methuen, Mass: GOAL/QPC, 1991.

Shook, R.L. *Turnaround: The New Ford Motor Company*. Englewood Cliffs, NJ: Prentice-Hall, 1990.

Spanbauer, S.J. *A Quality System for Education*. Milwaukee, WI: ASQC Quality Press, 1992.

Spanbauer, S.J. *Measuring and Costing Quality in Education: Using Quality and Productivity Methods to Improve Schools*. Appleton, WI: Fox Valley Technical College Foundation, 1989.

Spanbauer, S.J. *Quality First in Education...Why Not?* Appleton, WI: Fox Valley Technical College Foundation, 1987.

Spanbauer, S.J. *Quality First Process Model*. Appleton, WI: Fox Valley Technical College Foundation, 1988.

Townsend, P.L. *Commit to Quality*. New York: Wiley, 1990.

Walton, M. *Deming Management at Work*. New York: Putnam, 1990.

Walton, M. *The Deming Management Method*. New York: Putnam, 1986.